

**Remarks**

Reconsideration and allowance of this application, as amended, are respectfully requested.

Claims 1, 38, and 43 have been amended. Dependent claim 44 has been added. Claims 1-13 and 16-44 are now pending in the application. Claims 1, 38, and 43 are independent. The rejection is respectfully submitted to be obviated in view of the amendments and remarks presented herein. No new matter has been introduced through the foregoing amendments.

Claim 1 has been amended to define the bottoming device as having an application head that applies a cold glue, i.e., a starch glue, not a thermoplastic or "hot" glue. Support for the instant recitation is found in the background description at specification page 1, where Applicants disclose that "[t]he described type of glue application has stood the test of time in the devices for placing a paper bag bottom because it enables a clean application of large quantities of starch glue that is otherwise difficult to handle." Claims 38 and 43 have been amended in a similar manner. Claim 44 has been added to further define the scope of Applicants' invention. Entry of each of the amendments is respectfully requested.

35 U.S.C. § 103(a) - McDaniel, Boger, and Pedigrew

Claims 1-13, 20-27, and 29-43<sup>1</sup> stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 4,256,526 to McDaniel and US 4,687,137 to Boger et al. (hereinafter "Boger") and further in view of US 5,016,812 to Pedigrew.

The rejection under § 103(a) based on McDaniel and Boger in view of Pedigrew is respectfully deemed to be obviated. The combined disclosures of McDaniel, Boger, and Pedigrew would not have rendered obvious Applicants' presently claimed invention.

By way of review, Applicants' invention is directed to a bottoming device for forming a cross bottom paper bag. As indicated above in the introductory remarks, the bottoming device has an application head that applies a cold glue, i.e., a starch glue, not a thermoplastic or "hot" glue. Although cold glue can be difficult to handle, "[t]he described type of glue application has stood the test of time in the devices for placing a paper bag bottom because it enables a *clean application* of large quantities of starch glue" (specification page 1, last paragraph) (emphasis added). One drawback associated with using cold glue in prior art devices is that "this method of glue transfer makes it necessary to make available and later clean many mechanical glue transfer

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<sup>1</sup> In view of both the Office Action Summary and the statements of the grounds of rejection at Office Action page 5, Applicants believe that claims 16-19 and 28 are also grouped with this rejection.

components—such as for instance the plate roller and the format parts” (specification page 2, first paragraph).

Therefore, an object of Applicants’ invention is to provide a bottoming device that not only takes advantage of the features of applying cold glue but that overcomes the aforementioned equipment cleaning requirements. As disclosed at specification page 2, third paragraph:

An advantageous design form of the present invention can carry out a glue transfer process on the components to be glued while at the same time preventing a component of the bottoming device that is carrying the glue, such as the glue reservoir or the glue duct, from touching the bag components. For this purpose the output orifices should be appropriately distanced from the parts to be glued. The glue can be properly sprayed against the parts to be glued. This contact-free glue application can prevent the contours of the format from being smeared and thus distorted by the contact.

The combined disclosures of McDaniel, Boger, and Pedigrew do not teach all of Applicants’ claim features. Instant claim 1 defines a bottoming device with an application head that applies a cold glue. The bottoming device has a cold gluer that includes, *inter alia*, an “application head including a plurality of valves each having at least one cold glue output orifice through which the cold glue is directly applied to the folded bottom and/or the sheet, the valves being arranged in a configuration that includes at least a first valve row (VR<sub>i</sub>) and a second valve row (VR<sub>ii</sub>) with each of the first and second valve rows extending along a length of

the application head in a direction (y) that is transverse to a bag transfer direction (x)."

The asserted combination of McDaniel, Boger, and Pedigrew would not have rendered obvious the presently claimed invention. McDaniel discloses a method of applying a *hot melt adhesive* to a substrate. See, e.g., McDaniel's disclosure at column 3, line 65, through column 4, line 18 of suitable hot melt adhesives, including "conventional hot melt adhesives," a "foamed hot-melt adhesive," and other thermoplastic adhesives. An object of McDaniel's method is to apply the hot melt adhesive in a "U" shape on the substrate.

Furthermore, McDaniel applies the hot melt adhesive differently than Applicants' claimed bottoming device applies cold glue. McDaniel's hot melt adhesive is applied through gun 40, gun 41, and gun 42 (column 6, lines 49-57; Figure 2). Gun 40 has one extrusion nozzle 36 and gun 41 has one extrusion nozzle 37; gun 42 has one spray nozzle 38. That is not Applicants' claimed device. Applicants' claimed application head feature has multiple valves, i.e., valves located in at least two rows in order to provide high resolution of the applied adhesive. That is, the claimed application head has a valve configuration that includes "at least a first valve row (VR<sub>i</sub>) and a second valve row (VR<sub>ii</sub>) with each of the first and second valve rows extending along a length of the application head in a direction (y) that is transverse to a bag transfer direction (x). The reason for utilizing the claimed valve

configuration is disclosed by Applicants at specification page 8, lines 1-4: "In case of an arrangement of a very large number of valves 32 on one application head 61, it is possible to arrange the glue lines in the y direction close to one another and at the same time to achieve a very high resolution in the formation of the adhesive profile."

The examiner acknowledges that McDaniel fails to disclose "the structure of [the] gluer" (Office Action page 2). The examiner then relies upon the disclosure of Boger to overcome the deficiencies of McDaniel. Boger, however, also teaches applying a *hot melt adhesive* to a substrate, "particularly the plastic backing sheet of a disposable diaper" (abstract). In fact, Boger discloses dispensing "fine beads of molten thermoplastic adhesive such as pressure-sensitive hot melt adhesive upon a substrate" (column 2, lines 27-29).

The examiner then further acknowledges that the combined teachings of McDaniel and Boger do not meet Applicants' claimed feature of two rows of valves, i.e., "the valves being arranged in a configuration that includes at least a first valve row (VR<sub>i</sub>) and a second valve row (VR<sub>ii</sub>).". The examiner relies upon the disclosure of Pedigrew to overcome the combined deficiencies of McDaniel and Boger. Pedigrew, however, also teaches applying a *hot melt adhesive* to a carton (see, e.g., the abstract). Furthermore, Pedigrew even points out certain deficiencies associated with the

use of thermoplastic adhesives, i.e., "thermoplastic adhesives also present problems in packaging and cartoning applications" (column 1, lines 20-22, and column 1, line 23, through column 3, line 59). Accordingly, since McDaniel, Boger, and Pedigrew each disclose the use of a hot melt adhesive, the asserted combination does not teach all of Applicants' presently claimed features.

Furthermore, there is no teaching in any of McDaniel, Boger, and Pedigrew that would have led one to select the references and combine them, let alone in a way that would result in Applicants' presently claimed invention. In fact, as indicated above, Pedigrew actually points out the deficiencies of thermoplastic adhesives when used in packaging and cartoning applications. Therefore, the combined disclosures of McDaniel, Boger, and Pedigrew would not have rendered obvious Applicants' presently claimed invention.

In view of the foregoing, this application is now in condition for allowance. If the examiner believes that an

U.S. Appln. No.: 10/524,266  
Atty. Docket No.: P70231US0

interview might expedite prosecution, the examiner is invited to contact the undersigned.

Respectfully submitted,

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Date: November 30, 2007